

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Simon Peter Valentine, et al. **Docket No:** 3736.CS.US.P

Serial Number: 10/054,422

Group Art Unit: 2141

Filed: January 22, 2002

Examiner: Kristie D. Shingles

Re: METHOD AND APPARATUS FOR
DETERMINING UNMANAGED
NETWORK DEVICES IN THE
TOPOLOGY OF A NETWORK

May 24, 2006

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

RESPONSE TO FINAL OFFICE ACTION

Dear Sir:

This Response to Final Office Action responds to the Final Office Action (mailed May 16, 2006) received in connection with the above-captioned application.

Reconsideration of the application in view of the remarks submitted herein is requested.

Remarks begin on page 2 of this paper.

REMARKS

Claims 1-8 and 10-13 are pending in this application. Claims 1, 11 and 12 are independent.

All claims stand rejected by the Examiner under 35 U.S.C. § 103(a) as being unpatentable over US Patent Number 6,377,987, issued to James E. Kracht on February 4, 2003 (hereafter "Kracht") in view of US Patent Number 6,976,087, issued to Ronald L. Westfall *et al.* on December 13, 2005 (hereafter "Westfall") and in view of the *Microsoft Computer Dictionary* (hereafter "Microsoft").

Applicants believe that the finality of this Office Action is premature, and respectfully requests that the Examiner reconsider finality. No amendments were made in the previous Office Action, and the Examiner added a new reference (Microsoft) in the rejection. As such, this Office Action should not have been made final.

The arguments asserted by the Applicants in the "Response to Third Office Action" filed with the USPTO on February 21, 2006, are hereby re-asserted and incorporated herein by reference in their entirety. In addition to the previously filed and incorporated arguments, particular shortcomings of the proposed combination of references and the Examiner's erroneous assertions regarding the teachings of the references are provided below.

Claim Rejections - 35 U.S.C. § 103

Claims 1-8 and 10-13 stand rejected by the Examiner under 35 U.S.C. § 103(a) as being unpatentable over Kracht in view of Westfall and Microsoft. Applicants respectfully traverse this rejection.

The Examiner's rejection of claims 1-8 and 10-13 in the present Office Action hinges entirely upon the premise that the Applicants "endstation" is equivalent to Westfall's "endpoint". This equation is not correct.

First of all, the Examiner is looking to extrinsic evidence (Microsoft) of the definition of "endpoint" rather than looking at the clear definition of "endpoint" within the four walls of the Westfall patent. This is improper.

Westfall clearly states that the "endpoint" is a router in the network, not an endstation such as a workstation or a PC. This is consistent throughout the Westfall patent, and can be seen in a number of references. The table below lists every instance in the Westfall patent specification (usage in the claims is excluded) where "endpoint" is used, and clearly show that the "endpoint" in Westfall is a router.

Location	Text
Col 14, line 25-42	FIGS. 7A and 7B are flow diagrams illustrating a possible method for configuring a network to provide data connections according to one embodiment. FIGS. 7A and 7B depict a method 100 for provisioning a data channel according to one embodiment. Method 100 is typically performed by a provisioning system 64. <u>Method 100 begins by identifying the routers at the source and destination of the data connection channel (process block 104).</u> Process block 104A comprises reading relevant portions of the service description and the relevant data connection description when a service is being initially provisioned or an existing service is being re-provisioned. <u>The provisioning system in one embodiment uses this information to identify the parties at both endpoints of the data connection channel and the network locations of the parties.</u> If necessary, the network locations in one embodiment are translated from a fully qualified domain name to a numeric IP address or IP subnet using a Domain Name Service ("DNS") associated with the network.
Col 14, lines 43-57	<u>For the network location of each data connection channel endpoint, the IP address or IP subnet of the network location is compared to the IP subnet of each router interface in network topology database 60 (process block 104B).</u> <u>If the IP address of the network location belongs to the IP subnet of a router interface, the corresponding router and interface is selected as a possible data connection channel endpoint.</u> <u>If the IP subnet of the network location is identical to the IP subnet of a router interface, the corresponding router and interface is selected as a possible data connection channel endpoint.</u> The result of the comparison will be a set of one or more routers that in one embodiment act as the endpoint of the data connection channel. Process block 104 generates for each of the two endpoints of a data connection channel a set of one or more routers.
Col 14, lines 58 – col 15, line 2	FIG. 8 is a schematic diagram of a simple example wide area network connecting two local area networks according to one embodiment. It is an example of source and destination router identification. LAN 20 (i.e. IP subnet 20) is the source of the data connection channel. LAN 21 (i.e. IP

	<p>subnet 21) is the destination of the data connection channel. Identification of endpoint routers will determine that routers 10 and 11 are connected to IP subnet 20 and are possible endpoints at the source of the data connection channel. It will also be determined that routers 15, 16, and 17 are connected to IP subnet 21 and are possible endpoints at the destination of the data connection channel.</p>
Col 15, lines 22-29	<p>Method 100 continues by generating a path candidate extending between the source and destination endpoint routers (process block 108). For each endpoint where multiple routers were identified as a possible endpoint in process block 104, one of the routers is selected to use as an endpoint for the first attempt to generate an acceptable path candidate. Other ones of the routers are in one embodiment used in subsequent attempts.</p>
Col 26, lines 35-44	<p>Customer network clouds typically exist at the edge of the managed network and are accessed by one or a few managed routers. Their only significance to service provisioning is that any of the IP addresses or IP subnets in a customer network cloud in one embodiment serve as the endpoint of a data connection. The provisioning method is in one embodiment able to identify a managed router as the endpoint of a data connection channel even when it is not directly connected to a source or destination IP address or IP subnet.</p>
Col 11, line 65- col 12, line 7	<p>The goal of provisioning is to deploy data connection channels. The endpoints of a data connection channel are specified by the service description. The characteristics of the data connection channel are described by the corresponding data connection description in the service description. Each data connection description describing a one-way data connection will result in one data connection channel being provisioned. Each data connection description describing a two-way data connection will result in two data connection channels being provisioned.</p>
Abstract	<p>Network elements at endpoints of a data connection are identified. A network path is generated between the network elements at the endpoints. The network path is validated by determining whether the network path provides at least one service requirement. The service requirement may be a minimum bandwidth requirement, a maximum bandwidth requirement, a maximum delay requirement, a maximum jitter requirement, a reliability requirement, a requirement that the network path includes network elements capable of acting as security gateways that bracket untrusted sections of the network path, a reachability requirement, or a data collection capability requirement. Network elements along a validated</p>

	network path are configured to implement the service requirement. In one embodiment, the configuration performed on the network elements is recorded.
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It is clear from every usage of "endpoints" in Westfall that endpoints are routers.

The Westfall endpoint is very different from the Applicant's "endstation". Applicant's endstation is defined in paragraph [0043] as "e.g. a UNIX workstation, PC, printer, or other non-connecting network device". These are not the endpoint routers of Westfall.

Since the Applicant's "endstation" is distinct from Westfall's "endpoint", claims 1-8 and 10-13 are distinct, and allowable.

Second, assuming that we use dictionary definitions even though this is incorrect, then the dictionary definitions clearly show that "endpoint" is not the same as "endstation". The prefix "end-" is the only thing in common between these words. A "point" is not the same as a "station".

According to Webster's II New Riverside Dictionary, a "point" is "...3. A geometric object having no dimensions and no property other than location..." The Examiner uses Microsoft to define "endpoint" as "[t]he beginning or end of a line segment". This, too, is from geometry; the "endpoint" is the point at the end of a line segment. It is not the final end of the line.

According to Webster's II New Riverside Dictionary, a "station" is "...2. A place where a service is provided or operations are directed..." In the Applicant's patent, the "endstation" is place where the operation or service included in the message is directed.

Clearly, an "endpoint" is not equivalent to an "endstation".

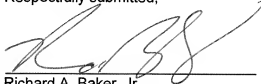
Because of this difference between Kracht, Westfall and the present application, Applicants respectfully assert that the finality of the rejection is improper and request that the rejection of claims 1-8 and 10-13 be reconsidered and withdrawn.

CONCLUSION

The pending claims define subject matter that is not described by the combination of Kracht with Westfall and Microsoft. The application is in condition for allowance. Applicants respectfully request that the Examiner reconsider and withdraw her rejections, and promptly allow this patent application to issue.

The commissioner is authorized to charge deposit account 503650 for any fees associated herein.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'R. Baker, Jr.', is written over a horizontal line.

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